



**Partnership for International Research and Education  
A Global Living Laboratory for Cyberinfrastructure Application Enablement**

**Project Title: IDE Prototype for COMP Superscalar**

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**I. Research Overview and Outcome**

**1. Background and Problem Statement**

COMP Superscalar is a new version of the GRID superscalar framework that enables the easy development of Grid-unaware applications(1). By means of a simple programming model, COMPSs keeps the Grid as transparent as possible to the programmer(1).

**2. Motivation**

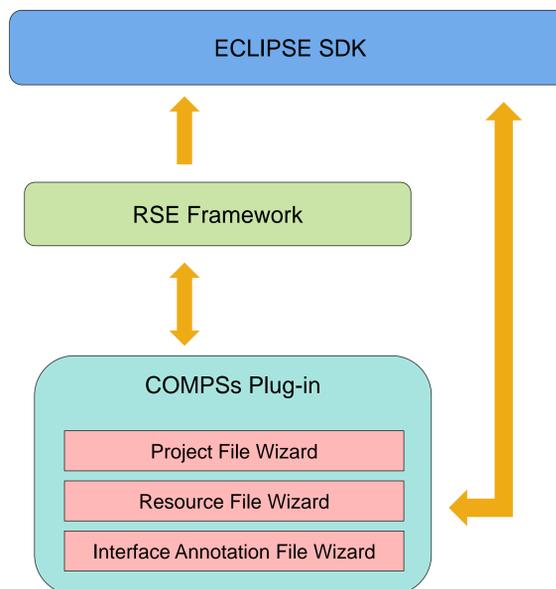
An increasing amount of research projects, like COMP Superscalar (COMPSs), have embraced the opportunity to customize a fully-featured open source IDE with their own plug-ins. The design and development of an IDE prototype for COMPSs is important to provide a user-friendly interface for programmers.

**3. Proposed solution**

Eclipse's architecture facilitates the desired IDE customization with the Plug-in Development Environment. For this reason, the development of an IDE prototype for COMPSs utilizes Eclipse's platform. The starting point is the automated generation of COMPSs configuration files.

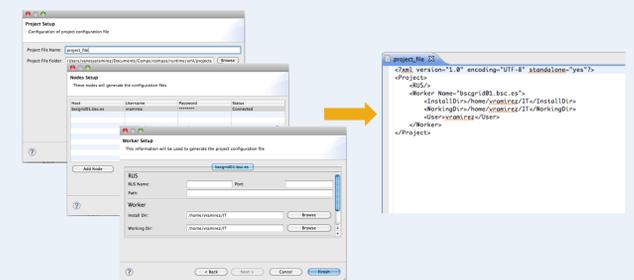
**4. Implementation**

The development of the COMPSs plug-in consists in the creation of three wizards that would generate xml project files, xml resources list files and java interface files which are necessary to run COMPSs applications. For the graphical interface of these wizards it was necessary to use the Eclipse Standard Widget Toolkit (SWT). Moreover, with the use of the RSE framework, the generation of these files can be done in remote systems.



**5. Future Work**

COMPSs project has the goal to implement a fully-customized IDE that would be able to run grid applications from a graphical interface. The development of new plug-ins that contribute to the automation of the different functionalities of the COMPSs runtime components is necessary. The plug-ins could be implemented incrementally and finally integrated into one single tool.



**6. References**

(1)E. Tejedor, R. Badia, T. Kielmann and V. Getov. **A Component-Based Integrated Toolkit. Making Grids Work**, CoreGRID series, Vol 7, pp 139-152. M. Danelutto, P. Fragopoulou and V. Getov, Eds. Springer., January 2008.

**II. International Experience**

**BSC**

The Knowledge to Market (K2M) Building, located at the UPC Campus, was where I spent most of my time working with Dr. Rosa Badia and her research team. Every two or three weeks we had team meetings where all the projects were discussed and planned. These meetings gave me a good perspective on how it is to be part of a research team and the ability of researchers to work in several projects at the same time.

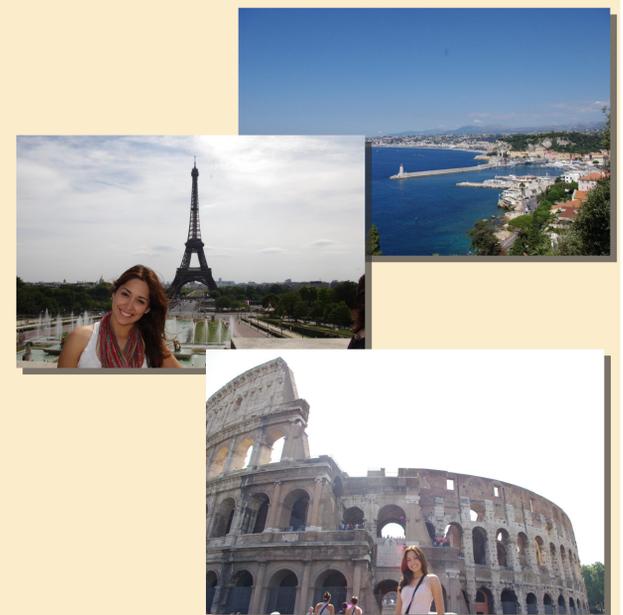


**Barcelona**

Barcelona is a great city for studying abroad. The public transportation is excellent and affordable. The city has many interesting places to visit like museums, parks, and art galleries. The architecture of the city is unique with places like Sagrada Familia, Agbar Tower and Park Guell. The food is amazing as well, specially if you like seafood.

**Europe**

This experience opened my eyes to different cultures, food and customs. I had the chance to visit several European countries in this trip including France, Germany and Italy. Moreover, traveling by train was a great experience and the scenery was amazing.



**III. Acknowledgement**

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